

5164506



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D135-1027-253
Job Sheet 190568



Part No: D135-1027-253

Job Qty: 1 pcs

Part Name: Mid Height Aft Crosstube



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/11/19

Job Tracking No:

Due Date: 3/29/19

Created By: Jesse White

Type: Stock

Description: SIOP

Note: D135-1027-253 REV.C IPP REV:A 17.01.24 NEW ISSUE DD VERF:JLM IPP REV:B 18.01.02 AS PER DWG
REV.B DD VERF:JFS IPP REV:C 18.11.09 AS PER DWG REV.C DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup	Run		
					Hrs	Hrs	Workcenter / Supplier Lead Time	
100	Handfinish - 1 - Chemical	1 pcs	3/29/19		0.00	0.17	Handfinish - 1 - 1	
							Handfinish - 1 - 2	
							Handfinish - 1 - 3	
							Handfinish - 1 - 4	
							Handfinish - 1 - 5	
							Handfinish - 1 - 6	
							Handfinish - 1 - 7	
							Handfinish - 1 - 8	
							Handfinish - 1 - 9	
							Handfinish - 1 - 10	
							Handfinish - 1 - 11	
							Handfinish - 1 - 12	
							Handfinish - 1 - 13	
							Handfinish - 1 - 14	
							Handfinish - 1 - 15	
							Handfinish - 1 - 16	
							Handfinish - 1 - 17	
							Handfinish - 1 - 18	
							Handfinish - 1 - 19	
							Handfinish - 1 - 20	
							Handfinish - 1 - 21	
							Handfinish - 1 - 22	
105	QC 7	1 pcs	3/29/19		0.00	0.00	QC 7 - 10	
							QC 7 - 13	
							QC 7 - 14	
							QC 7 - 15	
							QC 7 - 17	
							QC 7 - 18	
							QC 7 - 19	
							QC 7 - 2	



Container No: S164506



Part: D135 - 1027 - 253

Job No: 190568

Serial No/Batch: S164506

Revision: C

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 03/21/19

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

					QC 7 - 28	
					QC 7 - 3	
					QC 7 - 30	
					QC 7 - 34	
					QC 7 - 36	
					QC 7 - 37	
					QC 7 - 41	
					QC 7 - 47	JW
					QC 7 - 48	
					QC 7 - 51	
					QC 7 - 58	
					QC 7 - 59	
					QC 7 - 6	
					QC 7 - 60	
					QC 7 - 9	
					QC 7 - 68	
					QC 7 - 50	
					QC 7 - 67	
110	Purchasing	1 pcs	3/29/19	0.00 0.00	Purchasing - 1	03/21/2019 PL
					Purchasing - 2	
					Purchasing - 3	
120	Packaging 2-1 - Receive - B4B	1 pcs ✓	3/29/19	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	JW 19-03-21
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 27 - B4B	
					Packaging 2 - 28 - B4B	
					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
130	QC 6	1 pcs	3/29/19	0.00 0.00	QC 6 - 42	PD 19-03-25
					QC 6 - 9	
					QC 6 - 68	

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

				QC 6 - 61	
132 Crosstubes - 2 - B4B	1 pcs	3/29/19	0.00 1.00	Crosstubes - 1 - B4B	
				Crosstubes - 2 - B4B	BB 7/2/2019
				Crosstubes - 3 - B4B	
				Crosstubes - 4 - B4B	
135 QC 5	1 pcs	3/29/19	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	JUL 08 2019 9-89
				QC 5 - 30	
140 Outsource	1 pcs	3/29/19		SKY002-VC	2
150 Packaging 2-2 - Receive - B4B	1 pcs	3/29/19	0.00 0.00	Packaging 2 - 1 - B4B	2019-07-19
				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Packaging 2 - 17 - B4B	
				Packaging 2 - 18 - B4B	
				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
160 QC 6	1 pcs	3/29/19	0.00 0.00	QC 6 - 42	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS <table style="width: 100%;"><tr><td>Skid-tube ☐</td><td>Cross tube ☐</td><td>Eng. (Non-AW) ☐</td><td>Engineering ☐</td></tr><tr><td>Machining ☐</td><td>Small Fab ☐</td><td>Prod. Eng. Coord. ☐</td><td>Water Jet ☐</td></tr><tr><td>Large Fab ☐</td><td>Finishing ☐</td><td>Rec/Store/Packaging ☐</td><td>Supplier Quality ☐</td></tr></table>						Skid-tube ☐	Cross tube ☐	Eng. (Non-AW) ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Water Jet ☐	Large Fab ☐	Finishing ☐	Rec/Store/Packaging ☐	Supplier Quality ☐																						
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								Lead hand / Supervisor																																			
								QC / QA Coordinator																																			
Root Cause <table style="width: 100%;"><tr><td>Operator ☐</td></tr><tr><td>Manufacturing Process ☐</td></tr><tr><td>Equip/Tooling ☐</td></tr><tr><td>Handling/Preservation ☐</td></tr><tr><td>Material ☐</td></tr><tr><td>Product Improvement ☐</td></tr><tr><td>Process Improvement ☐</td></tr><tr><td>Human Factors ☐</td></tr></table>		Operator ☐	Manufacturing Process ☐	Equip/Tooling ☐	Handling/Preservation ☐	Material ☐	Product Improvement ☐	Process Improvement ☐	Human Factors ☐	FAULT CATEGORY <table style="width: 100%;"><tr><td>☐ Pressure/Forced</td><td>☐ Contamination</td><td>☐ Power Loss/Surge</td><td>☐ Positioned Wrong</td></tr><tr><td>☐ Bending</td><td>☐ Misaligned/off center</td><td>☐ Folio/Program</td><td>☐ Outside Tolerance</td></tr><tr><td>☐ Crushing</td><td>☐ BOM/Route</td><td>☐ Grain Direction</td><td>☐ Drawing</td></tr><tr><td>☐ Cracks</td><td>☐ Broken/Damage/Defect</td><td>☐ Weld</td><td>☐ Finish</td></tr><tr><td>☐ Crimp/Kink/Ripple/Wave/Twist</td><td>☐ Incomplete/Unclear Instructions</td><td>☐ Wrong Stock Pulled</td><td>☐ Part Lost/Missing</td></tr><tr><td>☐ Marks/Chatter</td><td>☐ Drill Holes</td><td>☐ Out of Sequence</td><td>☐ Misread</td></tr><tr><td>☐ Mislabeled</td><td>☐ Fit/Function</td><td>☐ Off-set/Set-up</td><td></td></tr></table>						☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
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Other/Details:																																											

					QC 6 - 9	JUL 19 2019	DAS 40 9-89
					QC 6 - 68		
					QC 6 - 61		
170 Packaging 3-1 - Stock - B4B	1 pcs	3/29/19	0.00 0.00	Packaging 3 - 1 - B4B			
				Packaging 3 - 2 - B4B			
				Packaging 3 - 3 - B4B			
				Packaging 3 - 4 - B4B			
				Packaging 3 - 5 - B4B			
				Packaging 3 - 6 - B4B			
				Packaging 3 - 7 - B4B			
				Packaging 3 - 8 - B4B			
				Packaging 3 - 9 - B4B			
				Packaging 3 - 10 - B4B			
				Packaging 3 - 11 - B4B			
				Packaging 3 - 12 - B4B			
				Packaging 3 - 13 - B4B			
				Packaging 3 - 14 - B4B			
				Packaging 3 - 15 - B4B			
				Packaging 3 - 16 - B4B			
				Packaging 3 - 17 - B4B			
				Packaging 3 - 18 - B4B			
				Packaging 3 - 19 - B4B			
				Packaging 3 - 20 - B4B			
				Packaging 3 - 21 - B4B			
				Packaging 3 - 22 - B4B			
				Packaging 3 - 23 - B4B			
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				Packaging 3 - 25 - B4B			
				Packaging 3 - 26 - B4B			
				Packaging 3 - 27 - B4B			
				Packaging 3 - 28 - B4B			
				Packaging 3 - 29 - B4B			
				Packaging 3 - 30 - B4B			
				Packaging 3 - 31 - B4B			
				Packaging 3 - 32 - B4B			
				Packaging 3 - 33 - B4B			
				Packaging 3 - 34 - B4B			
				Packaging 3 - 35 - B4B			
180 QC 21 - FG	1 pcs	3/29/19	0.00 0.00	QC 21 - FG - 21		JUL 22 2019	DAS 21 9-89
				QC 21 - FG - 70			
				QC 21 - SA - 53			

Part Op 100 - (Chemical Conversion Coat per QSI005 4.1) Alodine prior to sending the extrusion to an outside vendor.
 Descriptions: 105 - (QC7-Inspect Chemical Conversion Coat)
 110 - (Purchasing) Issue P/O to Tube Caron: 042567 Manufacture D135-1027-253 as per dwg (Bend, Remove excess material after bending) **Ship extrusion D6027-115** ***AS PER DWG NOTE 10, EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** Material release note is required
 120 - (Receive & Inspect for Damage & Mat'l Certs) Ensure material release note is attached
 130 - (QC6- All purchased or subcontracted products)
 132 - (Crosstube Grinding Booth) REMOVE ALL MARKS AS PER DWG
 135 - (QC5- Inspect part completeness to step on W/O)
 140 - ISSUE P/O: _____ C OF C IS REQUIRED
 150 - (Receive & Inspect for Damage & Mat'l Certs) C OF C IS REQUIRED
 160 - (QC6- All purchased or subcontracted products)
 170 - (Identify as per dwg & Stock Location: L6050)
 180 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6027-115	Crosstube Material	1 Ea (1 ea)	100-Handfinish - 1 - Chemical	S152382
D135-1027-253P	Mid Height Aft Crosstube	1 pcs (1 ea)	120-Packaging 2-1 - Receive - B4B	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Handfinish - 1 - Chemical	D6027-115	1	49	0
120-Packaging 2-1 - Receive - B4B	D135-1027-253P	1	11	0

Part Specifications

Specifications could not be found.

Plex 2/11/19 12:56 PM dart.white.jesse

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Other/Details:					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO042567



Supplier: TUB001-VC
Tube Caron Inc.
99 Louis-Joseph-Doucet Street
Lanoraie
QC
JOK 1EO Canada
Phone: 450-887-2766
Fax: 450-887-2897

PO No: PO042567
PO Date: 2/11/19
Due Date: 3/22/19
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Phone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pynt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	190567	D135-1027-253	Mid Height Aft Crosstube (Purchasing) Issue P/O to Tube Caron: Manufacture D135-1027-253 as per dwg (Bend, Remove excess material after bending) **Ship extrusion D6027-115** ***AS PER DWG NOTE 10, EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. *** Material release note is required	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00

IX MAR 21 2019

Line Item Note REV C

9	190568	IX	MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
9-89	190569	IX	MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
	191900	IX	MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
	191901	IX	MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
Sub Total:							5	0	5		\$1,500.00



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO042567



Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
12	190489	D135-1027-251	Std Height Aft Crosstube Issue P/O to Tube Caron: Manufacture D135-1027-251 as per dwg (Bend, Remove excess material after bending) **Ship extrusion D6026-110** ***AS PER DWG NOTE 10, EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** Material release note is required	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
1 X MAR 21 2019 Line Item Note REV D											
	190571	1 X	MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
	190572	1 X	MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
	191903	1 X	MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
	191905	1 X	MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
	191907	1 X	MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
Sub Total:							6	0	6		\$1,800.00



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO042567



Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	190560	D135-1027-153	Mid Height Fwd Crosstube Issue P/O to Tube Caron: Manufacture D135-1027-153 as per dwg (Bend, Remove excess material after bending) **Ship extrusion D6025-120** ***AS PER DWG NOTE 10, EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. *** Material release note is required	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
1 X MAR 21 2019											
Line Item Note REV B											
	190562		1 X MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
	190564		1 X MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
	191909		1 X MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
	191910		1 X MAR 21 2019	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
Sub Total:							5	0	5		\$1,500.00



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO042567



Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4	190575	D135-1027-151	Std Height Fwd Crosstube Purchasing - Issue P/O to Tube Caron: Manufacture D135-1027-151 as per dwg (Bend, Remove excess material after bending) **Ship extrusion D6025-120** ***AS PER DWG NOTE 10, EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. *** Material release note is required	Firmed	-	3/22/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00
Line Item Note REV D 190576 1 X MAR 21 2019 191908 1 X MAR 21 2019 Sub Total: 3 0 3 \$900.00											
										Grand Total:	\$5,700.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 3/21/19 12:52 PM dart.Lussier.Patrick

**SHIPPING BILL****BOL 14944****13/03/2019****Tube Caron Inc.**

99 Louis-Joseph-Doucet
Lanoraie, QC, Canada
J0K 1E0
Phone: 450-887-2766

Fax: 450-887-2897

Ship To:

Dart Aerospace Ltd
1270 Aberdeen Street
Hawkesbury, ON, Canada
K6A 1K7
Phone : 613-632-1053

Fax : 613-632-4443

Sold To:

Dart Aerospace Ltd
1270 Aberdeen Street
Hawkesbury, ON, Canada
K6A 1K7
Phone : 613-632-5200

Fax : 613-632-4443

Third Party Billing:

Ln	Item	Qty	Po	Job	Weight	UOM
1	PALETTE	1			20.00	Pounds
	D135-1027-151 REV D	1	✓ PO042567	J21867-11	13.36	Pounds
	D135-1027-151 REV D	1	✓ PO042567	J21867-12	13.36	Pounds
	D135-1027-151 REV D	1	✓ PO042567	J21867-16	13.36	Pounds
	D135-1027-153 REV B	1	✓ PO042567	J21867-10	14.57	Pounds
	D135-1027-153 REV B	2	✓ PO042567	J21867-15	29.14	Pounds
	D135-1027-153 REV B	1	✓ PO042567	J21867-8	14.57	Pounds
	D135-1027-153 REV B	1	✓ PO042567	J21867-9	14.57	Pounds
	D135-1027-251 REV D	1	✓ PO042567	J21867-5	16.21	Pounds
	D135-1027-251 REV D	1	✓ PO042567	J21867-6	16.21	Pounds
2	PALETTE	1			20.00	Pounds
	D135-1027-251 REV D	3	✓ PO042567	J21867-14	48.64	Pounds
	D135-1027-251 REV D	1	✓ PO042567	J21867-7	16.21	Pounds
	D135-1027-253 REV C	1	✓ PO042567	J21867-1	19.81	Pounds
	D135-1027-253 REV C	2	✓ PO042567	J21867-13	39.62	Pounds
	D135-1027-253 REV C	1	✓ PO042567	J21867-2	19.81	Pounds
	D135-1027-253 REV C	1	✓ PO042567	J21867-3	19.81	Pounds
	D135-1027-253 REV C	1	✓ PO042567	J21867-4	19.81	Pounds

Carrier:
Phone:
Way Bill:

Journey Freight
1-888-633-1252 #3221

Fob:
Freight Charges:

Fob Lanoraie
Collect

Total Of Packages :

2 PALETTES
96 X 32 X 36
96 X 32 X 36

Total Weight: 369.06 #

Carrier : Journey Freight

Shipper : Tube Caron Inc.

Declared Value :

(No Additional Insurance Required)

Not Applicable For Insurance Purposes

14-03-2019

CERTIFICATE OF CONFORMANCE

CUSTOMER : Dart Aerospace

DATE : March 21, 2019

P.O.# PO042567

I certify that the following parts were manufactured to the specifications stated on the drawings listed below.

Note: Material for manufacturing of parts is provided by Dart Aerospace.

PART NO.	QTY.	DRAWING NO. / REV.
D135-1027-253 ✓ MID HEIGHT AFT XTUBE	6 ✓ DAS 9 9-89	D135-1027-253 / REV.C
D135-1027-153 ✓ MID HEIGHT FWD XTUBE	5 ✓	D135-1027-153 / REV.B
D135-1027-151 ✓ STD HEIGHT FWD XTUBE	3 ✓	D135-1027-151 / REV.D
D135-1027-251 ✓ STD HEIGHT AFT XTUBE	6 ✓	D135-1027-153 / REV.D

Sincerely,

Kevin Gadoury

Kevin Gadoury

DART AEROSPACE LTD		Work Order:	190568
Description: MID HEIGHT AFT CROSSTUBE		Part Number:	D135-1027-253
Inspection Dwg: D135-1027-253 Rev: B		Page 1 of 2	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.550" TYP	+/-0.005"	3.552	1		Visual	
8.23" TYP	+/-0.030"				Visual	
12.08" TYP	+/-0.030"	12.074	1			
2.19" REF	+/-0.030"	2.20	1			
3.13" TYP	+/-0.030"	3.129	1			
Ø.194" THUR 2PL	+0.006" -0.001"	Ø.196	1			
Ø.194" THUR	+0.006" -0.001"	Ø.196	1			
17.0" 2PL	+/-0.100"	17.011	1			
Ø.313" THUR 6PL	+0.006" -0.001"	Ø.312	1			
Ø.670" THUR 2PL	+0.006" -0.001"	Ø.671	1			

WALL THICKNESS MEASUREMENTS

LOCATION FROM CL	DWG DIM	R1	R2	R3	R4				
CL	0.197"	0.198	0.203	0.200	0.201				
21"	0.197"	0.200	0.198	0.197	0.194				
21"	0.197"	0.194	0.191	0.192	0.199				
CENTER OF BEND	0.197"	0.196	0.192	0.194	0.200				
CENTER OF BEND	0.197"	0.202	0.197	0.198	0.204				

OUTSIDE DIAMETER MEASUREMENTS

LOCATION	DWG DIM	M1	M2				
CL	3.543"						
CENTER OF BEND	3.543"						
CENTER OF BEND	3.543"						

CRUSHING

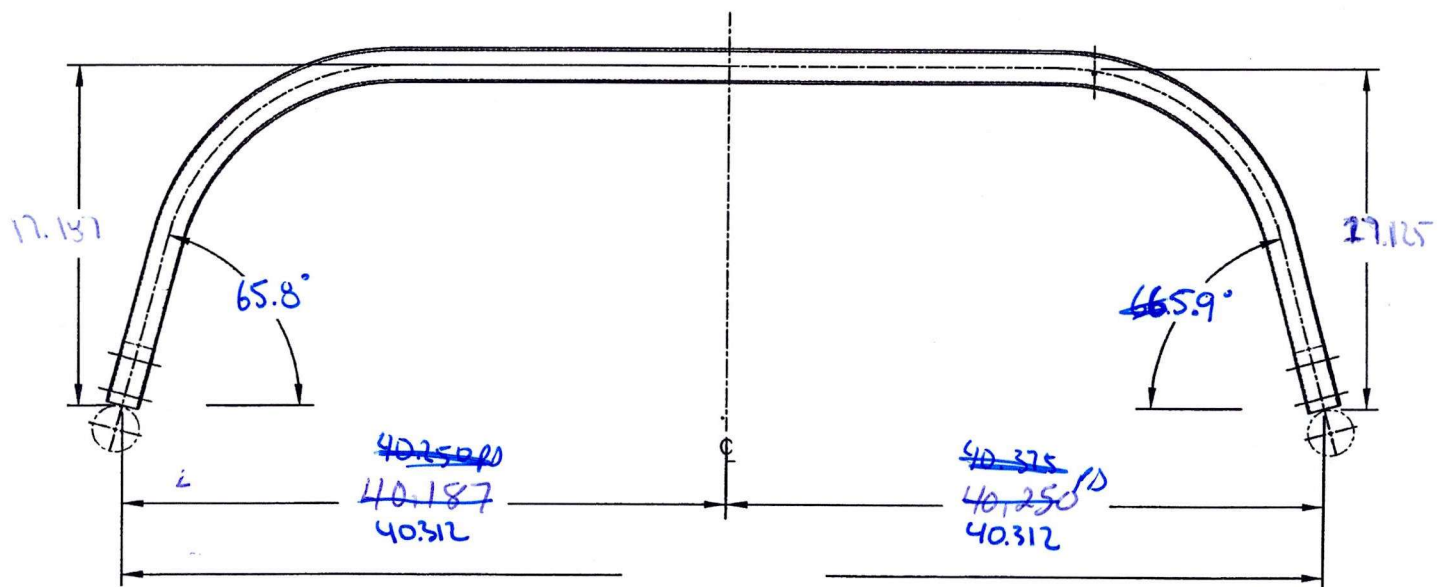
	SIDE A	SIDE B
MAX 2%	.13%	.17%

TWIST

	SIDE A	SIDE B
MAX 0.25"		

DART AEROSPACE LTD		Work Order:	190568
Description: MID HEIGHT AFT CROSSTUBE		Part Number:	D135-1027-253
Inspection Dwg: D135-1027-253 Rev: B		Page 2 of 2	

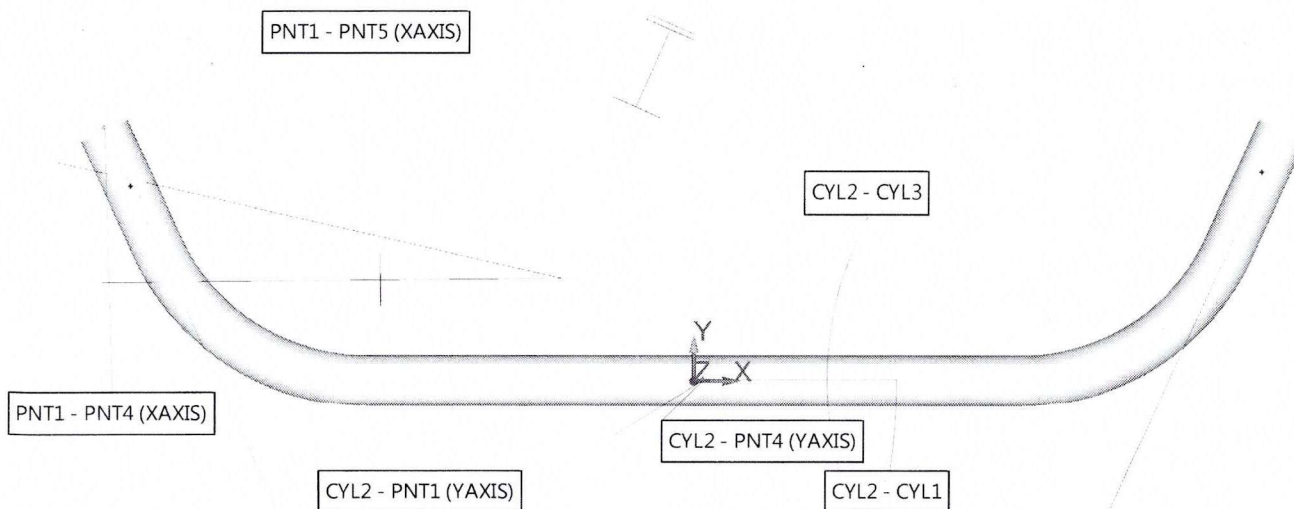
Required Dimension	Min	Max
Height	16.87"	17.13"
1/2 Span	40.28"	40.54"
Angle	64°	66°
Total Span	80.56"	81.08"
Bending Passes		
Crushing	0%	2%
Twist	0.0"	0.25"



Measured by:		Checked by:		QC Inspector:	
Date:		Date:		Date:	

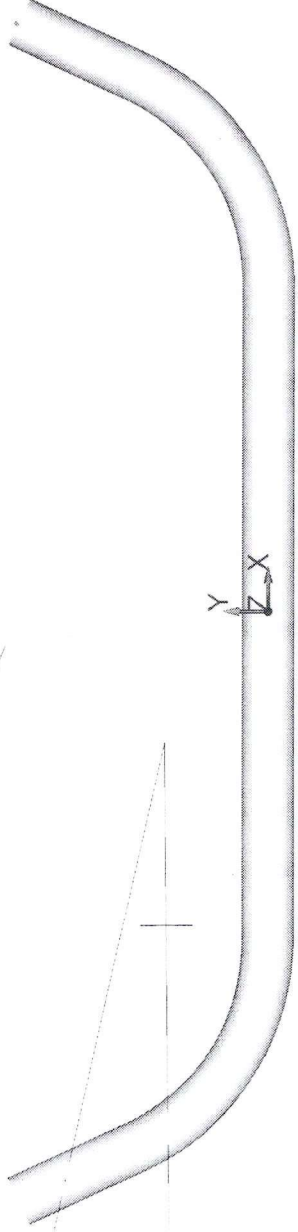
Engineering Approval: (If necessary)		Date:	
--	--	--------------	--

Rev	Date	Change	Revised by	Approved
A	18/01/16	New Issue	ED	

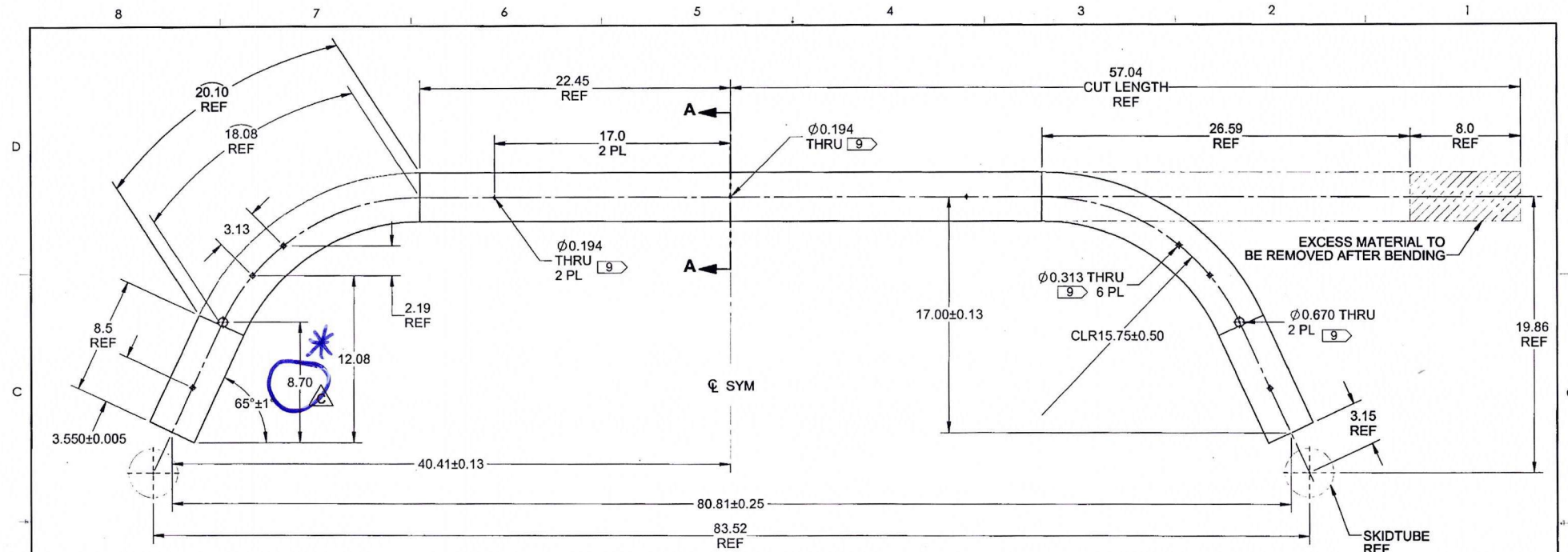


pcdmis		PART NAME : D135-1027-253_Pliage+Coupe				mars 09, 2019		14:20	
		REV NUMBER : Rev.B		SER NUMBER : S164506		STATS COUNT : 1			
∠	DEG	ANGL1 - CYL2 TO CYL1							
AX	NOMINAL	+TOL	-TOL	MEAS	DEV	OUTTOL			
A	-64.9992	0.5000	0.5000	65.6634	-0.6642	-0.1642			
∠	DEG	ANGL3 - CYL2 TO CYL3							
AX	NOMINAL	+TOL	-TOL	MEAS	DEV	OUTTOL			
A	64.9992	0.5000	0.5000	65.7910	0.7918	0.2918			
↔	IN	DIST1 - PNT1 TO PNT4 (XAXIS)							
AX	NOMINAL	+TOL	-TOL	MEAS	DEV	OUTTOL			
M	80.8110	0.2500	0.2500	80.6105	-0.2005	0.0000			
↔	IN	DIST2 - CYL2 TO PNT1 (YAXIS)							
AX	NOMINAL	+TOL	-TOL	MEAS	DEV	OUTTOL			
M	17.0010	0.1300	0.1300	17.1104	0.1094	0.0000			
↔	IN	DIST3 - CYL2 TO PNT4 (YAXIS)							
AX	NOMINAL	+TOL	-TOL	MEAS	DEV	OUTTOL			
M	17.0010	0.1300	0.1300	17.1123	0.1113	0.0000			
↔	IN	DIST4 - PNT1 TO PNT5 (XAXIS)							
AX	NOMINAL	+TOL	-TOL	MEAS	DEV	OUTTOL			
M	40.4055	0.1300	0.1300	40.3052	-0.1003	0.0000			

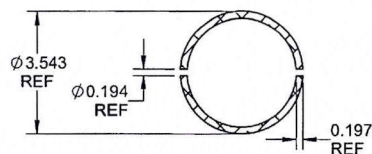
PNT4 - PNT5 (XAXIS)



↔	IN	DIST5 - PNT4 TO PNT5 (XAXIS)				
		NOMINAL	+TOL	-TOL	MEAS	DEV
AX						
M		40.4055	0.1300	0.1300	40.3052	-0.1003
						OUTTOL
						0.0000



D135-1027-253 MID HEIGHT AFT CROSSTUBE



SECTION A-A
SCALE 2X

NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6027-115
STRAIGHT LENGTH = 114.08±0.06 (BEFORE BENDING / TRIMMING)
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 20.57 lbs
- 8) MAX TWIST: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE SHALL BE NO LARGER THAN 0.25.
- 9) HOLES TO BE ALIGNED WITHIN 0.005 IN RELATION TO THE HOLE ON OPPOSITE SIDE OF CROSSTUBE.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038. TO BE PERFORMED AFTER FINAL POST-BEND GRINDING. ANY ADDITIONAL GRINDING REQUIRES ANOTHER LPI INSPECTION.
- 12) MAXIMUM TUBE FLATTENING DUE TO BENDING IS 2% BASED ON OD.

RELEASED

2018 OCT 31
ECS 16-1574

C	MOVED GH HOLES DIM 8.70 WAS 8.23	ZF	18.10.04
B	ADD QTY (2) Ø 0.313 HOLES, 3.13 WAS 3.15, 12.08 WAS 12.04. REASON: DESIGN CHANGE	ML	17.05.25
A	NEW ISSUE	ML	17.01.31
REV.	DESCRIPTION	BY	DATE
DESIGN	ML	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D135-1027-253 TITLE MID HEIGHT AFT XTUBE COPYRIGHT © 2017 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DRAWN	ZF		
CHECKED	MW		
MFG. APPR.	DD		
APPROVED	ML		
DE APPR.	CP	DATE 18.10.04	
APPROVED		REV. C	SHEET 1 OF 1
		SCALE	NTS



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB044044



Supplier: SKY002-VC
Skyservice
6120 Midfield Road
Mississauga
ON
L5P 1B1 Canada
Phone: 905-678-5636
Fax: 905-678-5841

Attention: Jenne, Heather

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB044044

PO Date: 7/18/19

Due Date: 7/19/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
①	190568	D135-1027-253	Mid Height Aft Crosstube - DO NOT USE P/O: _____ C OF C IS REQUIRED	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	190569		1 X JUL 19 2019	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
Sub Total:							2	0	2		\$239.00
②	191905	D135-1027-251	Std Height Aft Crosstube - DO NOT USE P/O: _____ C OF C IS REQUIRED	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	191907		1 X JUL 19 2019	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
Sub Total:							2	0	2		\$239.00
③	190576	D135-1027-151	Std Height Fwd Crosstube - DO NOT USE P/O: _____ C OF C IS REQUIRED	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	190575		1 X JUL 19 2019	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
Sub Total:							2	0	2		\$239.00

DAS
40
9-89



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB044044



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4	194644	D412-664-203	Aft Crosstube - High : TC STC SH01-9 Issue 3, FAA STC SR01298NY 09/01/08, EASA STC EASA.IM.R.S.01304 07/03/06, DGAC MEXICO STC IA- 316/2015 15/06/17 *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
						1 X JUL 19 2019					
	194647		1 X JUL 19 2019	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	196270		1 X JUL 19 2019	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	196271		1 X JUL 19 2019	Firmed	-	7/19/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
Sub Total:							4	0	4		\$478.00

Grand Total: \$1,195.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 7/19/19 1:28 PM Dart.Guerin.Kimberley

**skyservice****Work Order Traveler**

Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO41122	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: POHB044044 ✓
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:**CARRY OUT NDT ON:**

- ✓ 4 AFT CROSSTUBES , P/N: D412-664-203 , J/S: 194644 , 194647 , 196270 , 196271
- ✓ 2 STD HEIGHT FWD CROSSTUBES , P/N: D135-1027-151 , J/S: 190575 , 190576
- ✓ 2 STD HEIGHT AFT CROSSTUBES , P/N: D135-1027-251 , J/S# 191905 , 191907
- ✓ 2 MID HEIGHT AFT CROSSTUBES , P/N: D135-1027-253 , J/S: 190568 , 190569

DAS
40
9-89

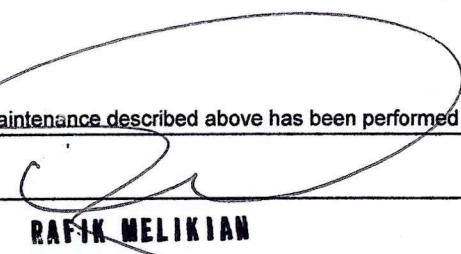
Action Taken:						Date:	Initial/Stamp:
LPI C/O IAW ASTM E-1417M-16 ***NO CRACK FOUND*** PEN. ZL-56, MPO13600, CLEANER SKC-S MPO13923 , DEV. MPO11715 , UV LIGHT M-20142						JUL 19 2019	 
Description	Location	P/N	Qty	Batch	S/N Off	S/N On	

RECEIVED

JUL 19 2019

DART AEROSPACE LTD.

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature: 	ACA/SCA Stamp 	Date: JUL 19 2019
Name: RAFIK MELIKIAN		